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## NOTICE OF ALLOWANCE AND FEE(S) DUE

79697

7590

03/18/2009

Cooper & Dunham, LLP  
30 Rockefeller Plaza  
20th Floor  
New York, NY 10112

EXAMINER

KIKINADZE, IRAKLI

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 03/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,934	01/08/2007	Mike Tesic	19.10.2011	6873

TITLE OF INVENTION: SCATTER REJECTION FOR COMPOSITE MEDICAL IMAGING SYSTEMS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/18/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
 or Fax **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

79697 7590 03/18/2009

Cooper & Dunham, LLP  
 30 Rockefeller Plaza  
 20th Floor  
 New York, NY 10112

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Mike Tesic

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TITLE OF INVENTION: SCATTER REJECTION FOR COMPOSITE MEDICAL IMAGING SYSTEMS

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/18/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
KIKNAIDZE, IRAKLI	2882	378-007000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB-122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB-47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2  
 3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

KIKINADZE, TRAKLI

ART UNIT

PAPER NUMBER

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DATE MAILED: 03/18/2009

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 175 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 175 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/552,934

**Examiner**

IRAKLI KIKNADZE

**Applicant(s)**

TESIC ET AL.

**Art Unit**

2882

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 2/2/2009.
2. ☒ The allowed claim(s) is/are 1-35, 54 and 56-71.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/Irakli Kiknadze/  
Primary Examiner, Art Unit 2882

### **DETAILED ACTION**

1. In response to the Office action mailed on October 1, 2008 the Amendment has been received on February 2, 2009.

Claims 36-53, 55 and 72-75 have been canceled.

Claims 1-35, 54 and 56-71 are currently pending in this application.

### ***Allowable Subject Matter***

2. Claims 1-35, 54 and 56-71 are allowed.

3. The following is an examiner's statement of reasons for allowance:

Claim 1 is allowed because prior art fails to teach or make obvious a method of imaging a selected tissue region of a patient's body, comprising the steps of: estimating first and second parts of a scattered portion, wherein the first part corresponds with photonic energy passing through the selected tissue region with a single scattering occurrence, and wherein the second part corresponds with photonic energy passing through the selected tissue region with multiple scattering occurrences; obtaining radiographic image data in relation to the detected radiation from the selected tissue region; and, utilizing the estimated first and second parts of the scattered portion to adjust the radiographic image data as claimed including all of the limitations of the claim.

Claim 7 is allowed because prior art fails to teach or make obvious an apparatus for use in imaging a selected tissue region of a patient's body, comprising: a processor operative for: estimating first and second parts of a scattered portion, wherein the first part corresponds with photonic energy passing through the selected tissue region with a single scattering occurrence, and wherein the second part corresponds with photonic energy passing through the selected tissue region with multiple scattering occurrences; obtaining radiographic image data in relation to the detected radiation from the selected tissue region; and, utilizing the estimated first and second parts of the scattered portion to adjust the radiographic image data as claimed including all of the limitations of the claim.

Claim 24 is allowed because prior art fails to teach or make obvious a method of imaging a selected tissue region of a patient's body, comprising the steps of: positioning a patient in a desired position for a radiographic procedure; with the patient positioned in the desired position, operating a parameter measurement device to measure a procedure specific value of a scatter related parameter and provide an output indicative thereof; obtaining radiographic image data in relation to the detected radiation from the selected tissue region; and operating a processor to receive the output and use the image-specific value of the scatter related parameter to adjust the radiographic image data as claimed including all of the limitations of the claim.

Claim 26 is allowed because prior art fails to teach or make obvious an apparatus for use in imaging a selected tissue region of a patient's body, comprising: a sensor for measuring a procedure specific value of a scatter related parameter with the

patient positioned in the desired imaging position and providing a sensor output indicative thereof; and a processor for receiving the first imaging information and the sensor output, and providing second imaging information based thereon as claimed including all of the limitations of the claim.

Claim 34 is allowed because prior art fails to teach or make obvious a method for use in imaging a selected tissue region of a patient's body, comprising the steps of: first operating a detector to detect portions of the photonic energy that have interacted with the area of interest of the patient's body and provide a detector output indicative thereof, wherein the detector output reflects imaging information for different portions of the area of interest obtained at corresponding different times of the exposure period; establishing scatter compensation information for the radiographic procedure; and second operating a processor to process the detector output, using the scatter compensation information to provide reduced scatter composite imaging information of the area of interest of the patient's body as claimed including all of the limitations of the claim.

Claim 35 is allowed because prior art fails to teach or make obvious an apparatus for use in imaging a selected tissue region of a patient's body, comprising: a processor for accessing scatter compensation information for the radiographic procedure and processing a detector output using the scatter compensation information to provide reduced scatter composite imaging information of the area of interest of the patient's body as claimed including all of the limitations of the claim.

Claim 54 is allowed because prior art fails to teach or make obvious a method for use in imaging an area of interest within a patient's body, comprising the steps of:

establishing a mathematical model for modeling a magnitude of expected scatter detection as a function of a distance between tissue being imaged and a detector surface; and using the mathematical model to set a distance between a tissue support structure and a detector of a medical imaging device as claimed.

Claim 56 is allowed because prior art fails to teach or make obvious a method for use in imaging an area of interest of a patient's body, comprising the steps of: detecting portions of the photonic imaging signal from the area of interest of the patient's body and providing imaging information based thereon; and operating a processor to process the imaging information using the first and second imaging parameter values as claimed including all of the limitations of the claim.

Claim 65 is allowed because prior art fails to teach or make obvious an apparatus for use in imaging an area of interest of a patient's body, comprising: a sensor system for measuring, with the patient in an imaging position for the radiographic procedure, at least a first imaging parameter value and a second imaging parameter value and providing an imaging parameter output indicative thereof; a detector for detecting portions of the photonic imaging signal from the area of interest of the patient's body and providing imaging information based thereon; and a processor for using the imaging parameter output to process the imaging information as claimed including all of the limitations of the claim.

Claims 2-6, 8-23, 25, 27-33, 57-64 and 66-71 are allowed by virtue of their dependence.



Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

4. Applicant's arguments, see page 9, filed February 2, 2009, with respect to claims 1-75 have been fully considered and are persuasive.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRAKLI KIKNADZE whose telephone number is (571)272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Irakli Kiknadze

/Irakli Kiknadze/

Primary Examiner, Art Unit 2882

/I. K./ March 14, 2009